AUTHOR INDEX TO VOLUME 3

References with (EC) are from the Editor's Column

Allen, S. J. M., H. Kersten and Joseph Maas. Crystal structure of electrodeposits from copper acetate solutions—169

Ambrose, H. A. (see Lawton, H. C.)—185

Anderson, Evald. On the role of the electric wind in electrical precipitation in gases—23

Austin, J. B. Temperature distribution in solid bodies during heating or cooling. A correction—179

——— Vacuum apparatus for measuring thermal expansion at elevated temperatures, with measurements on platinum, gold, magnesium and zinc—240

Barret, William M. Semiportable alternating-current susceptibility meter—149

Barton, Donald C. Eötvös torsion balance—29

Barton, H. A. Atomic disintegration by artificially accelerated protons—159(EC)

Berberich, Leo J. Measurements of the phase angles of shielded resistors—296

Bleakney, William M. Some measurements on the vapor viscosities of the two common pentanes, two pentenes, and carbon tetrachloride—123

Botset, H. G. (see Wyckoff, R. D.)—90

Buchta, J. W. Auditory mechanism—203(EC)

——— Magneto-optical method of chemical analysis—54(EC)

Cameron, G. Harvey. X-ray method of determining the sizes of sub-microscopic crystals—57

Campbell, George A. Three superfluous systems of electromagnetic units—230

Cole, Kenneth S. Theory of surface conductance at an electrolyte-solid interface—114

Dickinson, T. M. (see Metcalf, G. F.)—11

Gaines, Newton. Magnetostriction oscillator producing intense audible sound and some effects obtained—209

Greenfield, E. W. (see Whitehead, J. B.)—324

Hanawalt, J. D. (see Morell, L. G.)—161

Heiland, C. A. Preliminary note on a new magnetometer—18

Hill, E. L. Interaction of light and sound waves—119(EC)

——— Mass of the hydrogen isotope H^2—268(EC)

——— Quantum mechanics and optics—120(EC)

—— — Relativistic quantum mechanics—269(EC)

— — — Wave nature of atoms—268(EC)

Kersten, H. (see Allen, S. J. M.)—169

——— and Joseph Maas. Crystal structure of black nickel—137

Koga, Isaac. Thickness vibrations of piezoelectric oscillating crystals—70

Lawton, H. C., H. A. Ambrose and A. G. Loomis. Chemical treatment of rotary drilling fluids. Release of cuttings: Chemical *vs.* mechanical methods—185

Loomis, A. G. (see Lawton, H. C.)—185

Maas, Joseph (see Allen S. J. M.)—169

——— (see Kersten, H.)—137

McDermott, Eugene. Application of the reflection seismograph—39

Metcalf, G. F. and T. M. Dickinson. New low noise vacuum tube—11

Morell, L. G. and J. D. Hanawalt. X-ray study of the plastic working of magnesium alloys—161

Morgan, S. O. (see White, A. H.)—53

Muskat, M. (see Wyckoff, R. D.)—90

Oncley, J. L. (see Williams, J. W.)—314

Osteen, John A. Resistance-temperature relation of beryllium oxide and zinc oxide—81

Peters, J. C., Jr. and E. B. Woodford. Characteristics of certain caesium-oxide photoelectric cells—172

Poulter, Thos. C. and Lester Uffelman. Penetration of hydrogen through steel at four thousand atmospheres—147

Slichter, Louis. Theory of the interpretation of seismic travel-time curves in horizontal structures—273

Smith, W. O. Capillary flow through an ideal uniform soil—139

Thompson, L. Reduced scale studies in armor penetration—155

Uffelman, Lester (see Poulter, Thos. C.)—147

Waldorf, Sigmund K. Amplifier-oscillograph applied to the study of dielectrics with continuous potentials—1

Westendorp, W. F. Inverter-lamp for the conversion of 60-cycle power into 1000-cycle modulated light —193

Wetzel, W. W. Quantum mechanics and collision problems—205(EC)

White, A. H. and S. O. Morgan. Erratum: Dielectric properties of some glycols—53

Whitehead, J. B. and E. W. Greenfield. Capillary action in impregnated paper insulation—324

Williams, J. W. and J. L. Oncley. Dielectric constant and particle size—314

Woodford, E. B. (see Peters, J. C.)—172

Wyckoff, R. D., H. G. Botset, M. Muskat. Flow of liquids through porous media under the action of gravity—90

ANALYTIC SUBJECT INDEX TO VOLUME 3

Alloys
X-ray study of the plastic working, L. G. Morell, J. D. Hanawalt—161

Armor
Reduced scale studies in penetration, L. Thompson— 155

Capillary action
Flow of liquids through porous media, R. D. Wyckoff, H. G. Botset, M. Muskat—90
Flow through an ideal soil, W. O. Smith—139
In impregnated paper insulation, J. B. Whitehead, E. W. Greenfield—324

Conductivity, electrical (see Electrical conductivity and resistance)

Conductivity, thermal (see Heat conduction)

Crystals and crystal structure
Changes in structure of black Ni, H. Kersten, J. Maas—137
Sizes of sub-microscopic crystals by x-rays, G. H. Cameron—57
Structure of electrodeposits from coppper acetate solutions, S. J. M. Allen, H. Kersten, J. Maas—169
Thickness vibrations of piezoelectric oscillating crystals, I. Koga—70
X-ray study of the plastic working of alloys, L. G. Morell, J. D. Hanawalt—161

Dielectrics and dielectric properties
Amplifier-oscillograph; dielectrics with continuous potentials, S. K. Waldorf—1
And particle size, J. W. Williams, J. L. Oncley—314
Properties of some glycols, A. H. White, S. O. Morgan—53

Drilling fluids
Chemical *vs.* mechanical methods of treatment of rotary drilling fluids, H. C. Lawton, H. A. Ambrose, A. G. Loomis—185

Editor's column
Atomic disintegration by artificially accelerated protons, H. A. Barton—159
Auditory mechanism, J. W. Buchta—203
Chemical analysis by magneto-optical method, J. W. Buchta—42
Interaction of light and sound waves, E. L. Hill—119
Mass of the H isotope H^2, E. L. Hill—268

Editor's column (continued)
Quantum mechanics and collision problems, W. W. Wetzel—205
Quantum mechanics and optics, E. L. Hill—120
Relativistic quantum mechanics, E. L. Hill—269
Wave nature of atoms, E. L. Hill—268

Electrical circuits
Inverter-lamp for 1000-cycle modulated light; 60-cycle power, W. F. Westendorp—193

Electrical conductivity and resistance
Conductance at an electrolyte solid interface, K. S. Cole—114
Resistance-temperature relation of oxides, J. A. Osteen—81

Errata
Dielectric properties of some glycols, A. H. White, S. O. Morgan—53
Temperature distribution in solids during heating or cooling, J. B. Austin—179

Gases
Penetration of H through steel, T. C. Poulter, L. Uffelman—147

Geophysics
Application of the reflection seismograph, E. McDermott—39
Capillary flow through an ideal soil, W. O. Smith—139
Flow of liquids through porous media, R. D. Wyckoff, H. G. Botset, M. Muskat—90
Seismic travel-time curves in horizontal structures, L. Slichter—273
Semiportable susceptibility meter, W. M. Barret—149
Use of Eötvös torsion balance, D. C. Barton—29

Heat conduction
Temperature distribution in solids during heating, J. B. Austin—179

Instruments and methods
Amplifier-oscillograph; dielectrics with continuous potentials, S. K. Waldorf—1
Application of the reflection seismograph, E. McDermott—39
Electric wind in electrical precipitation in gases, Evald Anderson—23
Eötvös torsion balance, D. C. Barton—29
Inverter-lamp for 1000-cycle modulated light; 60-cycle power, W. F. Westendorp—193

Instruments and Methods—(continued)
Magnetostriction oscillator producing intense audible sound, N. Gaines—209
Measurements on vapor viscosities, W. M. Bleakney—123
New low noise vacuum tube, G. F. Metcalf, T. M. Dickinson—11
New magnetometer, C. A. Heiland—18
Penetration of H through steel, T. C. Poulter, L. Uffelman—147
Phase angles of shielded resistors, L. J. Berberich—296
Semiportable susceptibility meter, W. M. Barret—149
Sizes of sub-microscopic crystals by x-rays, G. H. Cameron—57
Thermal expansion at elevated temperatures, J. B. Austin—240
Treatment of rotary drilling fluids, H. C. Lawton, H. A. Ambrose, A. G. Loomis—185

Insulation
Capillary action in impregnated paper insulation, J. B. Whitehead, E. W. Greenfield—324

Liquids
Capillary flow through an ideal soil, W. O. Smith—139
Conductance at an electrolyte solid interface, K. S. Cole—114
Flow through porous media under the action of gravity, R. D. Wyckoff, H. G. Botset, M. Muskat—90

Oscillators
Magnetostriction oscillator producing intense audible sound, N. Gaines—209

Photoelectric effect; cells
Characteristics of CsO cells, J. C. Peters, Jr., E. B. Woodford—172

Piezoelectric properties
Thickness vibrations of crystals, I. Koga—70

Precipitators
Electric wind in electrical precipitation in gases, E. Anderson—23

Sound
Magnetostriction oscillator producing intense audible sound; some effects, N. Gaines—209

Steel
Armor penetration, L. Thompson—155
Penetration by H, T. C. Poulter, L. Uffelman—147

Thermal expansion
At elevated temperatures, results on Pt, Au, Mg and Zn, J. B. Austin—240

Units
Superfluous systems of electromagnetic units, G. A. Campbell—230

Vacuum tubes
Low noise tube, G. F. Metcalf, T. M. Dickinson—11

Viscosity
Measurements on vapor viscosities, W. M. Bleakney—123